

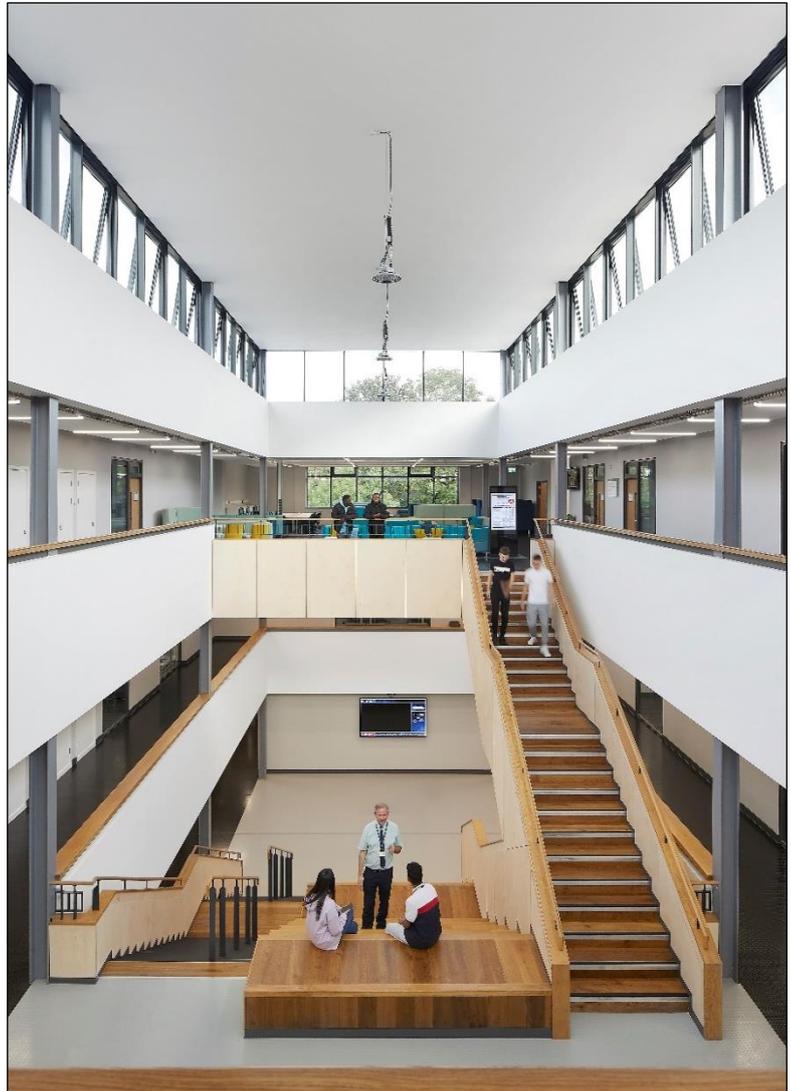
**Awards:**

**2021 – Constructing Excellence – Innovation**  
**2021 – IStructE - Best Educational Building**

The Black Country & Marches Institute of Technology is Dudley College’s new educational development located at the heart of the Black Country in Dudley. This new employer-led Institute will be specialising in higher level technical education programmes and Apprenticeships in the fields of engineering, manufacturing, MMC, medical engineering and digital technologies.

Through a consistent approach to minimising cost and material waste, GCA undertook a stringent review of the steel frame design and applied repetition and rationalisation of steel sections and utilisations. This provided a cost saving of £102K and an equivalent carbon reduction of 154t.

The building was designed using best sustainable practice and adopted the innovative TAB system (Thermally Activated Building) to provide room cooling and heating. An essential part of the system was the utilisation of the thermal mass of the RC slabs as a means to store and discharge thermal loads.



- Collaborative design and procurement (government backed) model
- Exposed aesthetically aware Structure and large central atrium space
- £16m Build
- Complex site topography
- Constrained site

Serving the Black Country and the Marches, the Institute of Transformational Technologies (IoTT) delivers industry focused level 4+ programmes for the transformational sectors of advanced manufacturing, modern construction methodologies and medical engineering.

The building consists of large educational spaces including an atrium, lecture theatres specialist educational facilities, and a light industrial facility used for the research and development in manufacturing.

This public building will be situated on a brownfield piece of land which was historically the site of the Dudley railway station and had also undergone severe limestone mining activities at the turn of the century.



## Tudor Grange Academy, Solihull

- **£3.5m, 14 Classroom Education Building**
- **Co-ordination around an existing building**
- **Integrated structural\civil design**
- **Complex Ground Conditions**
- **Co-ordination via 3D modelling**

This scheme was delivered via a traditional procurement route. Our involvement included the design of the steel frame, floor and roof structures and foundations.

One of the key challenges on this project was to overcome the significant extent of existing services that lay beneath the site.

GCA delivered an integrated design which met the key project aims of affordability and architectural impact.

The project was delivered to BIM level 2 which assisted with collaborative design and quick resolution of project challenges.

